

Yale (L. M.)

J. C. P. R.

PHIMOSIS:

*A REPORT FROM THE SURGICAL SECTION
TO THE NEW YORK ACADEMY
OF MEDICINE.*

Compliments of
BY
LEROY MILTON YALE, M. D.,

SURGEON TO CHARITY HOSPITAL, ETC.

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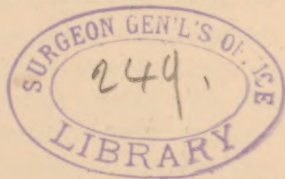
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PHIMOSIS : A REPORT FROM THE SURGICAL SECTION TO THE NEW YORK ACADEMY OF MEDICINE.

GENTLEMEN : This paper is presented as a report from the Surgical Section of the Academy, in accordance with the requirement in the Constitution of the Academy. The reporter would offer, as an excuse for the imperfect collation of authorities, the fact that he had not purposed to report until the autumn, but determined to do so at this time in response to a request from the President.

Phimosis is differently defined by different writers. By some the term "is applied to that condition of the penis in which it is impossible to retract the prepuce behind the glans." Others restrict it to those cases in which the inability to retract the foreskin is due to narrowness of the preputial orifice. In the present report the former—more general—definition will be accepted, as the disorders arising from the condition seem to be essentially the same, whether the phimosis be due to narrowness of, or adhesion of, the prepuce. When necessary, the variety of phimosis intended will be especially specified.

In the hope of eliciting discussion, the present report is submitted in the form of propositions.

PROPOSITION I.—*In childhood phimosis is the rule, and may be considered as physiological.*

The frequency of phimosis is a commonly-accepted fact; nearly every writer upon genito-urinary diseases mentions it. Drs. Van Buren and Keyes say: "With very young children, phimosis is so common that it may be considered normal. The foreskin of the child is developed out of all proportion to the rest of the penis, taking the member after puberty as a standard of comparison." There is, however, no occasion for citing authorities. No one, whether giving especial thought to the subject or not, can have failed to observe how rarely the glans is seen uncovered in young children, even when the penis is in a state of erection.

This inability to uncover the glans is frequently due to the length of the prepuce and to the narrowness of its orifice alone. I have satisfied myself of this, in some cases, by passing, without obstruction, a probe beneath the foreskin quite to the sulcus behind the corona and in various directions. Observation too of some cases of so-called "ballooning" of the prepuce, shows that the collection of urine may be sufficient to separate the prepuce entirely from the glans, while the obstruction at the orifice may be considerable. Notably, I have observed this to be true in the cases of certain adolescents, where a narrow and somewhat tortuous outlet, admitting with difficulty an ordinary probe, rendered micturition slow and difficult. But, as a rule, I think it will be found that adhesions, in the sense of an agglutination of the two epithelial surfaces, exist in phimosis, and that, in most cases, they constitute the real difficulty to be overcome. Any one who has made or witnessed many circumcisions, or other operations upon the foreskin of children, must have observed the frequency of this agglutination, and that it is often so strong as to require considerable force for its breaking up.

Prof. Joh. Bókai (*Jahrbücher für Kinderheilkunde*, Dec. 5, 1871), in a paper on "Die zellige Verklebung (scheinbare Verwachsung) der Vorhaut mit der Eichel mit Knaben," etc., gives the result of his investigations in this connection. He had noticed the frequency of troubles of micturition depending upon phimosis and adhesions, and endeavored to ascertain how frequently the latter existed in children. His conclusion is, that agglutination of the two mucous surfaces is, in general,

a physiological condition, which should be considered pathological only under certain circumstances. To justify this conclusion, he gives the result of one hundred examinations of children, from birth to thirteen years of age. For convenience, he divides adhesions into three grades :

1. Adhesions extending from the corona glandis backward.

2. Adhesions beginning at the anterior part of the glans, and running backward.

3. Adhesions reaching from the point of the glans to the sulcus retro-glandaris.

The adhesions varied in degree of firmness as well as in extent, the more extensive being sometimes so close as to cause bleeding when torn off.

Now, of the one hundred children examined by Bókai, all above seven years of age—eight cases in all—were perfectly free from adhesions. Of the ninety-two cases under seven years of age, six were perfectly free. Altogether, then,

14	cases	showed	no	adhesions.
24	"	"	the 1st	grade of adhesion.
22	"	"	the 2d	" "
40	"	"	the 3d	" "

The younger the children, the more extensive, as a rule, were the adhesions, and *vice versa* ; the freedom of the prepuce increased with the age.

The adhesions occur, too, without reference to the shape of the prepuce or the narrowness of its outlet.

Some time since Drs. Holgate and Bosley, Attending Physicians to the Class of Children's Diseases in the Out-Door Department of Bellevue Hospital, made (at the instance, I think, of Dr. J. Lewis Smith) a large number of examinations of children with reference to this same question. The investigation was prompted, as with Bókai, by the frequency of disorders of micturition in connection with phimosis.

No statistical record of these examinations was made, but, in a conversation with me regarding them, Dr. Holgate stated that he considered phimosis in children to be normal, and estimated that it existed in eighty per cent. of the cases examined. "All cases of phimosis have adhesions." "The

narrow outlet is rare" (meaning, I suppose, an outlet so narrow as to entirely prevent retraction of the prepuce), "occurring, perhaps, once in twenty or thirty cases."

Dr. M. J. Moses of this city, in answer to an inquiry from me, says, "Among infants who have been circumcised by me on the 8th day, numbering, by rough estimate, say forty-five or fifty, I found adherent prepuce, I believe, three times The adhesion was directly to the corona of the glans." The disparity between this proportion and that given by the gentlemen above quoted is due probably to different understanding as to what constituted an adhesion, Dr. Moses only including firm adhesions, and throwing out ordinary agglutination.

PROPOSITION II.—*Phimosis, by its unusual severity or persistence, may become pathological, and may give rise to disturbances both local and remote.*

The *local disorders* include (a) *those which are purely mechanical* in their nature: such as interference with the proper development of the genitals; difficult or intermittent micturition, or even total retention of urine; and retention of secretions beneath the prepuce. (b) *The direct results of the mechanical irritation*, or mechanical obstruction: such as itching of the glans, pain, balanitis, and also, as a result of the straining requisite to void the urine, prolapsus recti or hernia. (c) *Genito-urinary symptoms not directly mechanical*: such as incontinence of urine, vesical irritation or tenesmus, hæmaturia, priapism, and, in adult life, erotic dreams, seminal emissions, painful and unsatisfactory coitus, etc.

The *remote phenomena* are generally disorders of the nervous system, and among the disturbances of this kind that have been referred to phimosis as a cause are gastralgia, neuralgia, amblyopia, reflex paralysis, paresis, incoördination, etc.

To speak of these various classes more in detail:

Interference with the development of the organ caused by tight prepuce is not common, but cases of it have been referred to by writers.

Disorders of micturition, however, dependent upon phimosis, are of very frequent occurrence—so frequent, indeed, as hardly to demand extended comment. The commonest

trouble is dysuria, in the forms of difficult expulsion of the urine and of interruption of the flow, the former being the more common. The difficulty sometimes reaches the degree of complete retention. The existence of dysuria is not wonderful, if the length and frequent narrowness of the prepuce, the position of the preputial orifice, the close application of the prepuce to the meatus urinarius, and the collections in or near the latter of secretions, be recollected as so many hinderances that may present themselves to the flow of urine. Still further, dysuria is often seen to depend upon simple agglutinations between the epithelium of the glans and of the prepuce, even when there is no seeming obstruction. Cases to illustrate the various forms of obstructed micturition must present themselves to the recollection of every one present, and there is no need to discuss this group of disorders.

Nearly as frequent are the troubles arising immediately from the irritation of retained urine or smegma. Itching is very common; and so, too, are attacks of balanitis or balanoposthitis. I have seen cases in which the attacks of balanitis seemed to have produced inflammatory adhesions, in addition to the agglutinations previously existing, thus aggravating the subsequent condition of the parts. Of course, this itching excites in the patient an unconquerable desire to pull at the prepuce, or to rub or scratch the penis; and hence, unfortunately, the vice of masturbation very frequently has its rise.

The great difficulty experienced in voiding urine leads to prolapsus recti, and to hernia, as the direct result of the necessary straining.¹

Of the genito-urinary disturbances not directly mechanical, the most common, by far, are incontinence of urine and priapism. Less common are vesical irritations and hæmaturia. If the phimosis persists to adult life, erotic dreams with the usual concomitant of seminal emissions, and painful or unsatisfactory coitus, are not rare; the latter due, in part at least, to purely mechanical causes.

Incontinence of urine is so commonly dependent upon phimosis, that I have for years been in the habit of correcting

¹ In a similar manner I have seen hernia produced in an elderly man suffering from enlargement of the prostate.

the latter, if it exist, before trying other treatment, whenever I have been consulted for incontinence of urine in boys. Priapism, too, is a very frequent and often a striking symptom. I have in mind cases in which it was the main reason why the child was brought to my notice by the mother, the accompanying dysuria not having been considered of sufficient importance. Vesical irritation is not rare. Hæmaturia is less frequently observed. Of the additional symptoms mentioned as obtaining in adult life, it hardly need be said that the phimosis, by its irritation of the glans, naturally increases the tendency to erotic symptoms. So, too, by the increased sensitiveness of the organ, and by the mechanical interference with intromission, coitus may be rendered both painful and difficult. I have seen a middle-aged married man, to whom coitus had become a matter of difficulty from adhesions (probably due to a balanitis) of the prepuce to the posterior third or half of the glans, the anterior part being freely uncovered.

When the intimate connection between disorders of the generative organs and those of the nervous system is recollected, we should naturally look to find the latter dependent upon a condition which, like phimosis, we have already seen to be the exciting cause of much local irritation.

The earliest references to such a cause for nervous disarrangements, that I have met with, are in Dr. Bumstead's well-known work on "Venereal Diseases." These references are to articles in the *Gazette des Hôpitaux* and *Revue de Thérapeutique Medico-Chirurgicale*, by Fleury, Borelli, and Anagnostaxis, the neuroses specified being gastralgia, neuralgia, and amblyopia. I regret that I have been unable to find in this city files of these journals of so early a date (1850 and 1851), and that I can therefore give no further account of the cases there presented.

Within a few years, however, several articles have appeared upon reflex irritations from the genital or genito-urinary organs. Dr. Sayre, at the meeting of the American Medical Association in 1870, presented a paper upon "Partial Paralysis from Reflex Irritation, caused by Congenital Phimosis and Adherent Prepuce." In this paper are recited three cases. The first, occurring in a child five years of age,

was one of paresis of the extensor muscles of the thigh. The co-existence of phimosis with great irritation of the prepuce, priapism, and an orgasmic condition, led Dr. Sayre to suspect that the paresis was dependent upon the local excitation. Circumcision was accordingly done. The child's general condition was at once relieved, and within a fortnight he recovered the power of walking without assistance. The second case was one of phimosis in a lad of fourteen, who also suffered from "paralysis of his legs." Circumcision relieved the symptoms, which had previously resisted the ordinary appropriate methods of treatment. The third case was in a lad of fifteen. He presented for symptoms, neuralgia, weakness of the legs, and "falling fits," "because his legs would not hold him up." He complained, moreover, of being "troubled every night with *painful* erections and frequent emissions," but denied masturbation. Circumcision was likewise followed in this case by immediate improvement; the nocturnal disturbances ceased, or nearly, and the "fits" also. It is not quite evident whether the "fits" mentioned in this case were of a convulsive nature, or were some less violent expression of disturbed co-ordination. In addition, Dr. Sayre expresses his belief that the existence of phimosis, by its disturbance of the co-ordination, may be an exciting cause of hip-disease, through the frequent falls to which the patient is subject.

In the NEW YORK MEDICAL JOURNAL for October, 1871, Dr. M. J. Moses published an article on the "Value of Circumcision as a Hygienic and Therapeutic Measure," and in it relates a case of convulsion and "nervousness" relieved by circumcision. A second case of "absolute melancholia" was cured in the same way.

In a paper read before this Academy, February 19, 1874, Dr. F. N. Otis related a large number of cases illustrating "reflex irritations throughout the genito-urinary tract, resulting from contraction of the urethra at or near the meatus urinarius." Preliminary to these he recited a case, treated by Dr. Brown-Séquard, in which an apparent cerebral *ramollissement* was cured by circumcision.

A second paper of Dr. Sayre's ("Transactions of the American Medical Association," 1875) presents some further cases.

The first was one of spasmodic contraction of the adductors and flexors of the upper and lower extremities, and a state of "ecstasy" with priapism. The symptoms were quite violent, and appear to have been distinctly orgasmic. It does not appear whether any form of masturbation was observed as exciting the "ecstasy." Quite firm adhesion of the prepuce to the glans existed, as well as a narrow orifice of the foreskin. The prepuce was split, and torn from the glans. Speedy amelioration of symptoms followed the operation. The second case was one of paresis of the lower extremities, especially of the left leg, with atrophy. Improvement was rapid after circumcision. The eighth case is interesting: A case of double varo-equinus, that had undergone considerable instrumental treatment, was materially relieved by circumcision; the talipes being of a paralytic nature, and dependent, in Dr. Sayre's opinion, upon a phimosis, which caused considerable local disturbance. Appended to the last-named paper are some cases cited by Dr. Otis from his own practice and that of other gentlemen. They illustrate retention of urine with partial paraplegia, incontinence with paraplegia, enuresis with hebetude, all relieved by removing the phimosis.

Still further, Dr. James S. Green contributes to Dr. Sayre's paper a striking case of "hyperæsthesia of the skin over the whole body, very marked want of coördination of motion in the arms and hands, and great difficulty in walking." The case grew worse for three years in spite of treatment. Circumcision was followed by relief of the hyperæsthesia within a few hours, "and in forty-eight hours (he) had recovered entirely the use of his limbs."

The following history of a case, which I saw through the courtesy of Dr. Sayre, shows the most frequent variety of disturbance of locomotion associated with phimosis:

CASE I.—*March 16, 1877.*—Laurence Nelson McKee, aged seventeen and a half months. (Colored.) The child was brought to Dr. L. H. Sayre because of his inability to walk. The mother gave the following history: The child never had walked; had made few efforts to do so. She thought the left side seemed to be paralyzed; when she "walked him along" his left lower extremity dragged. The left hand was constantly clinched, and could be opened with difficulty. He has had no difficulty in micturition, no incontinence of urine. The mother has noticed, however, a tendency

on the child's part to play with his privates, and also that the penis was frequently erect, perhaps half the time. The child has phimosis; aperture of prepuce very small. Prepuce split up by Dr. L. H. Sayre, and found to be adherent up to the meatus. It was worked off from the glans by means of a scalpel-handle. A considerable collection of smegma was removed. The frenum was also cut.

21st.—Mother reports that the night after the operation she observed the child to attempt to stand alone. Within the five days that have elapsed the mother states that he has improved in his speech. The left hand is opened more readily, the rigidity of the fingers is gone, and he begins to use the hand freely, which he never did before the operation. The dragging of the foot is much better, and that member is put out nearly as freely as is the other.

A month later I saw the child. The mother reports him as still improving in his gait.

Dr. Green has sent me the notes of several cases besides the one above cited. Some of these are particularly interesting, on account of the long duration of the symptoms, the age of the patients, as well as the results of treatment. Here follow some of the more striking cases:

CASE II.—T. S. H., aged forty-two years. Has always been troubled with pains in head, back, and limbs. Since 1858 has been subject to slight epileptic convulsions. Has been losing his memory gradually. Is constantly in a state of nervous irritability; despondent, and has a suicidal tendency. Has been troubled with spermatorrhœa. I found the prepuce adherent and contracted. A probe passed into preputial orifice only to the depth of three-eighths of an inch. Operation of circumcision performed. Six weeks after operation reports himself as follows: "I am a new man; no headache; no spasms; memory improved; am calm, and my judgment in business was never so clear. In fact, I do not remember I was ever so well."

CASE III.—C. S., aged thirty-three years. Literary gentleman. Has suffered for ten years with spermatorrhœa. Headache, fugitive pains in the back and limbs, with acute hyperæsthesia of the skin, and gradual loss of power in his right leg. He was morose, despondent. Testicles sensitive. Spasm of the sphincter vesicæ; frequent retention of urine. Prepuce adherent. Circumcision performed. Two months after operation he writes: "All my symptoms are relieved to my entire satisfaction."

CASE IV.—J. C., aged thirty years. Machinist. Has been losing his sight for two years, so that it is difficult for him to pursue his business. He is despondent, abstracted, and at times, when hurried to answer a question, troubled with aphasia. Has had his eyes examined in New York. His difficulty pronounced to be atrophy of the optic nerves.

Examined penis; found in a constant state of semi-erection. The pre-

puce could be retracted, but formed a tight constricting band behind the corona.

The meatus urinarius was very small. Circumcision, and slitting up of meatus to receive number twenty-five English sound performed. Three months after operation his sight, speech, and mental symptoms vastly improved.

CASE V.—F. B., aged eighteen years. Has suffered from spasms of all the flexor muscles of the right side, and want of coördination from birth. Having been treated by a number of eminent neurologists for several years without any relief, he gave up all hope, and was bid aside to live out as well as he could the rest of his existence. Being anxious to try the effect of circumcision upon him, Dr. Sayre, who had seen him ten years previously, was called in consultation. Circumcision was advised and performed. Subsequently I divided the adductors of the thigh on either side, and the ham-string muscles of the right side, and now he walks with very little difficulty with a cane. Previous to the circumcision he could not maintain the upright position without support, nor even turn himself in bed. He had also always had spasm of the sphincter vesicæ, which was relieved by the operation.

Dr. Green remarks, in conclusion: "These are a few of the cases of adherent prepuce upon which I have operated. Having performed the operation for nervous disorders in thirty-four instances—in all but one with satisfactory results—I am satisfied that failure, in many instances, arises from the imperfect manner in which the operation is done, and want of cure in the subsequent dressing. In some of the cases the relief was almost miraculous, and I refrain from the recital lest my veracity be questioned by the incredulous members of the profession. However, it is not more incredible that circumcision should produce such results, than that a punctured wound should give rise to tetanus, or that the replacement and fixation of a displaced uterus should relieve all the nervous symptoms of an hysterical woman."

To the *American Journal of Medical Sciences* for October, 1876, Dr. A. McL. Hamilton contributes an article on "Nervous Disturbances dependent upon Various Forms of Genital Irritation." The article contains an interesting discussion of the neuro-physiology and neuro-pathology of this class of cases, but the examples cited present no symptoms not shown by the cases already quoted. The same comment will apply

to the occasional cases that have appeared in the medical journals, and that have come under my notice.

The forms of nervous disturbance observed in these cases, so far as I have ascertained, have been, notably, incoördination of muscular movements, including those necessary to speech, less commonly spasm or spastic contraction, and paresis, generally of the lower extremities. I find no case of paralysis of sensation, but hyperæsthesia is often mentioned. Several cases of amblyopia have been published. A mental condition resembling hysteria or hypochondriasis is a frequent element in the clinical histories.

Of course, in such an assemblage of cases none should be admitted for which other known causes of the nervous disorder may be found to exist, at least unless the relief of the phimosis was followed by marked and speedy amelioration of the symptoms. Another point, more difficult of determination, must be whether, in a given case, the neurosis depended upon the phimosis *per se*, or, as Dr. Jacobi suggests, upon "the habit of masturbation, so easily contracted when the phimosis is marked enough to prove an annoyance and irritation, and frequently given up when the source of constant irritation has been removed."

It is not claimed that cases of reflex disturbances remote from the genito-urinary organs are very frequent, but simply that, setting aside the cases that are for the reasons stated doubtful, there remain a sufficiently large number to give phimosis a place as a recognized cause of neuroses, and one which should not be overlooked in making out the etiology of a given case. It is only fair to consider cases where relief of the phimosis alone has been followed by immediate cessation of the nervous symptoms, as evidence of the dependence of the latter upon the former condition.

Beyond this, however, we may safely go. Wherever there is marked irritation of the genitals with phimosis, even if we do not believe the condition of the prepuce to be the sole or main cause of the coexisting neurosis—where, indeed, we feel sure that the nervous manifestation, or the intellectual deficiency, is due to causes beyond our reach—we may safely assume that the relief of the phimosis will be productive of

benefit. The removal of a source of irritation will probably be followed by the subsidence of such aggravation of the prime trouble as was due to this local cause, and the prompting to masturbation—a vice notably common among those whose mental or moral vigor is already impaired—much diminished.

It should be mentioned, that the amount of remote nervous disturbance is by no means proportionate to the apparent local irritation. A case occurs to my recollection bearing upon this point: W. W., aged eleven months; already able to run about easily, showing no locomotory disturbance; intelligence good; “a forward child,” in speech and otherwise. His mother, uncovering him as he slept, called my attention to his priapism. The penis was very large and exceedingly rigid—“healthy,” as the mother expressed it. She complained, however, that the child was constantly playing with his privates, and added, “I am not sure that the *bonne* does not help him sometimes.” This priapism was said to be nearly constant, sleeping or waking. Further inquiry elicited the facts that he was restless in sleep; micturition was tardy, and accomplished, as a rule, only with considerable encouragement from his attendants. Circumcision relieved all the local symptoms, and gave the child quieter sleep directly after the operation.

A word only is needed with reference to treatment. Simple breaking up of adhesions, the forcible retraction of the prepuce with or without its division, divulsion of the preputial orifice, and complete circumcision, are the various methods that have been employed. Bókai, who only interferes if there be pathological symptoms, relies solely upon retraction, breaking up the adhesions with a probe or other suitable instrument. Inflation of the prepuce with water forced from a syringe is recommended for the same purpose. Dr. Helgate informs me that in all his cases—a great number—he has found forcible retraction sufficient. The glans, after being cleaned of smegma, is anointed, and the prepuce again brought forward. In this he agrees exactly with Bókai. This manœuvre is repeated by the surgeon, if necessary, and the attendant in any event directed to repeat it daily. One instance he men-

tioned of recurrence twice of the enuresis, owing to the agglutinations having been allowed to reëstablish themselves. In such a case circumcision will probably make a complete cure.

If the prepuce be redundant, the circumcision is the preferable operation; if not, splitting of the prepuce, if necessary, may be done to assist its retraction. In adolescents, or in children, where the prepuce has been the seat of much inflammatory process, the knife will be generally needed in one method or the other.

Dr. Sayre urges, as does Dr. Green in his comment upon the cases above cited, the necessity of circumcision, and of doing it thoroughly, watching carefully for constricting bands of mucous membrane, and nicking them if they exist, dividing also the frenum if it be short, etc.

[In the discussion upon the foregoing paper, Dr. F. N. Otis cited certain cases of spermatorrhœa and mental disorder depending upon an unusually long prepuce, although no phimosis existed. The symptoms disappeared upon ablation of the foreskin. Dr. Otis was inclined to attribute the disturbances to the constant "poulticing," so to speak, of the glans by this redundant prepuce.]



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